

## ABSTRACT

### OPAQUE FLAKE FOR COVERT SECURITY APPLICATIONS

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Opaque flakes, such as pigment or bright flake used in paints and inks, have a selected shape and/or other indicia to provide a covert security feature to an object. In some embodiments the composition includes base pigment, and the opaque covert flakes match the visual

characteristics of the base pigment. In another embodiment, opaque covert flakes are mixed

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in the carrier with base pigment at a concentration sufficient to avoid changing the appearance of the composition. In another embodiment, opaque covert flakes are mixed in a clear or tinted varnish base that can be applied over an existing security feature. Shaped opaque covert flakes are not readily detectable by causal observation, but in some embodiments are easily seen at 100X magnification.